Displays Are Booming
See Page 2

COMPUTERWORLD

The Draft -and ED People
See Page 7

Vol. 1, No. 10 CAMBRIDGE, MASSACHUSETTS, OCTOBER 18, 1967 25 cents

RECORD PROFITS FOR IBM

Sub-editors throughout the country again pulled out the headline "IBM RECORDS RECORD PROFITS" as the third quarter figures were announced last week, and showed that for the fifteenth straight year the monolith of the computer industry was continuing its normal financial progress. The figures showed the net profit was up 29.4% in the third quarter. Details are are given in the financial section on Page 6.

One factor increasing the profits was the increased trend of computer buyers to actually buy, rather than lease, their equipment. This brings in the profits quickly to the manufacturer.

The various problems the manufacturer has had with its hardware and software seem to be reflected only in the increased operating costs, and not in the profit figures.

For an editorial on this subject, see 'Profit' Is Not 'Progress', on Page 2.

NSF GRANTS FOR EDUCATIONAL EXPERIMENTS

The National Science Foundation invites grant proposals seeking support for a limited number of cooperative educational experiments.

Through selected experimental projects, the Foundation plans to explore the costs and educational value of enabling educational institutions to share computers on a geographical basis. In this connection, Foundation personnel met with nearly 30 university and college computing center directors in September to discuss the interest educational institutions might have, and the computing capacities which might be made available on a regional basis, for cooperative experiments involving institutions such as universities, colleges, junior colleges, and high schools.

Members of the group agreed that such projects were feasible and that they could prove most useful for educational purposes. They emphasized that faculty training, liaison among participants, and intellectual leadership were essential ingredients to be considered.

In his 1967 message to Congress on Health and Education, President Johnson noted the promise which computers may have for education. He directed the Foundation, working with the Office of Education, to establish an experimental program for developing the potential of computers in education. Through a newly established Office of Computing Activities, the Foundation hopes to stimulate new ideas and approaches to computer utilization in the research and educational processes. One important requirement, to [illegible] students and faculty with e[illegible]tive [illegible]ess to computers, is the g[illegible]th[illegible] mputer-sharing projects.

The GE 635 computer will stay in Sun Oil's Philadelphia Computer Center when the newly-ordered UNIVAC 1108 arrives later this month.

Univac 1108 for Sun Oil

PROMISES NOT TRUSTED IN COMPUTER EVALUATION

Proved performance – directly contrasted to specifications, promises, and futures – was what won the Sun Oil order for a large-scale Univac 1108. Sun Oil felt that the chance of being severely hurt was too great, in the light of the delays in hardware, software, and poor performance which has been the lot of so many users recently.

The selection process accordingly was heavily weighted by a country-wide tour where members of the Sun Oil team visited users of the equipment bid by the various manufacturers, and simply listened to what the users said.

DISADVANTAGES OF MULTI-PROGRAMMING

The system will be used for what Sun Oil is calling "Scheduled Jobs". These are jobs which must come out of the computer room fairly promptly. Sun Oil thinks that a job which needs 50% of the available time between when it enters the computer room, and when it must be completed for the actual processing is best done in this manner. That is, if a job takes 2 hours to process, and becomes available at 10 A.M. in the morning, then if it is needed before 2 P.M. in the afternoon they will "schedule" it.

The reason for the breakdown of jobs is that when a job is in multi-programming mode the elapsed time between its insertion in the job stack, and its completion, is often unpredictable, and for scheduled jobs, quite unsatisfactory. The Univac 1108 will not use multi-programming, but will concentrate on getting the job done.

GE 635 TO STAY

The GE 635 in the installation will continue in operation. It will handle those jobs which do not have to be scheduled, primarily consisting of small jobs, and long, non-critical (so far as time is concerned), operations such as linear programs. A company spokesman refused comment today when asked about how Sun Oil regarded the performance of the 635 which was installed (as a 625) about a year ago.

The other bidders were IBM and Control Data. Details as to which systems were bid are not available. The

Continued on Page 4

Rumor Mill

Whose publicity campaign was somewhat dampened when the man in charge up'd and left the company almost before the ink on the news release of his appointment was dry?

Clue: They have just got a computer into production.

What is the effect of giving a "Non-disclosure" agreement to users? Some people think it is being used to keep information that does exist, very quiet – TOO quiet!

What government agency is considering taking the authority for interpreting PL/I specs form IBM? Seems they think that the situation is becoming too much of a marketing tool to be tolerated very much longer.

Clue: They have a record of achievement in this sort of thing!

New Memorex Disk-Drive

Jan 68 Deliveries; 45 Msec Seek Time

Memorex Corporation has started marketing a 2311-Compatible Disk-Drive - the Memorex 630. The advantage from the users point-of-view is in the improved access time - reduced from the IBM average of 67 msec. to 45 msec. This can save on practically all computer runs except in multi-programming operations.

Other advantages of the new unit are in improved loading and unloading characteristics, and in easier servicing. The top cover has been re-designed so that it does not have to be taken completely off during service operations, but instead is hinged, so that it can be opened, and yet left on the drive.

Memorex Corporation is still testing and evaluating the new equipment at their subsidiary company, Peripheral Systems, Sunnyvale, California; but have already opened a production facility for the new units. Their intent is to market it through the major computer manufacturers rather than to the users direct.

The unit will be shown in the Fall Joint Computer Conference, at Anaheim, California, next month, and deliveries are to begin in January.

THREE MANUFACTURERS

The new Memorex development means that there are now three manufacturers of disk drives in the country. Control Data Corporation has been making drives for some time, and have been selling them through the OEM market. These Control Data drives are typically 1311-compatible (rather than 2311), and use price and improved packing densities to gain their share of the market, rather than a significant change in the access timings.

The provision of Disk-drives comes shortly after Memorex started delivering its own disk-packs. (See Computerworld. Sept. 13). These disk-packs can be used on IBM and on the new Memorex drives interchangeably. Compatibility in operation, COMPUTERWORLD learned last week, has been the guiding rule throughout the development of the drives. Among the Memorex people developing the drives, a number have experience with the IBM San Jose laboratories, which have specialized in disk-drive areas for some years.

New 6000 Program Watches Degeneration

CDC Announces Optima, Written By Orchard-Hays

MINNEAPOLIS, MINN. -- A new software package, shortly to be delivered by Orchard-Hays & Company, brings fail-soft techniques into the software application field. Called OPTIMA, it seeks quick and reliable solutions to central optimization problems - but the algorithms are designed so that the problems are pushed through to solution, regardless of problems like degeneracy. Each algorithm has a large number of fall-back procedures built-in. These are automatically activated whenever trouble occurs in obtaining a solution.

OPTIMA, a powerful mathematical programming system for use with Control Data 6400, 6500 and 6600 Computer Systems, has been announced by Control Data Corporation. Mathematical programming is a generalization of linear programming.

It is designed to find solutions which will maximize or minimize some numerical quantity – such as profit or cost. OPTIMA is an extremely flexible program. Among other things, it enables users to mix, compare, and combine a large number of solutions.

More than 100 major mathematical programming operations may be specified within OPTIMA. And many of these operations have large numbers of options. In most applications, this powerful, all encompassing program will be used "as is". Sophisticated users, however, can manipulate, modify and combine data and algorithms to suit practically any conceivable mathematical programming requirement.

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Editorials

'Profit' Is Not 'Progress'

Today COMPUTERWORLD reports that IBM has once more made record profits. It has been suggested to COMPUTERWORLD – by more than one IBMer – that such news items make our coverage of the problems users are having with IBM equipment look silly. The argument is: – How can we be so bad – and yet make profits so consistently?

The implied confusion of "Profits" with "Progress" is, of course, fallacious. Profits can be made in many ways; and sometimes come from selling equipment which is needed only because the software has been poorly designed, or poorly executed. In fact a case can be made for claiming that some of IBM's failure to provide promised software has increased their profits – through forcing sales of additional hardware.

Welcome Compatibility

The computer era has introduced many new thoughts into the human mind. One of the most important has been the whole idea of compatibility as a basic characteristic of almost anything. Before computers, "compatibility" had meaning in divorce courts but not often in everyday technical jargon. In the last three years the word has loomed so high that to some it is a patron saint and to others it is a swear word.

A characteristic of the new duPont tape is that it allows a broader range of compatibility. Many installations previously had to waste some of their tape dollars or had to have mutually incompatible types of recordings made available. Now they can use a single tape over a wider range which will meet their needs. This is to everyone's advantage.

Naturally, the new role of the new tape is still very much open to question. Many facts need to be found out but in general we do know that it helps compatibility.

Welcome compatibility.

Univacs Get Communications

One of the more surprising omissions of the original design for the UNIVAC 9000 Series was its weakness in the communications area. Industry pundits suggested that UNIVAC was not interested in undercutting its profitable market in 1004's, 1005's, etc. Whatever the facts may be, we now do have communications on the 9000 Series. This is good.

The need for effective small scale computer terminals has been underlined by the problems involved in getting Model 20's to feed into larger 360 Series. Perhaps this wasn't thought to be important before and the furore is indicative of a coming move in the role of the small computers.

COMPUTERWORLD is glad to see another small computer – the 9000 Series – get the hardware necessary for it to fill its place in the computer spectrum of the late 60's.

COMPUTERWORLD

THE NEWSWEEKLY FOR THE COMPUTER COMMUNITY

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Displays Stop People Fidgeting

Display Units have shown a surge in popularity during the last six months exceeding industry projections. One major consultant reports that their file updating this summer showed that the increase in activity was between 300 and 500%!
Here are some of the points about the way displays are being used.

The advantages of displays in handling processing requirements when people are literally waiting is bringing more and more work into the CRT-device area. Although the difference, realistically speaking, may be only a few seconds per transaction, this adds up – and in addition the waiting customer gets the impression of an operation which is working hard for them, and not one which spends a considerable amount of its time just waiting - waiting - waiting.

HOSPITALS

In a recent case an airline reservation system has, for the first time, incorporated a display into the seat-buying process at airports. Until now seat-buying operations have been handled by systems which basically produced hard-copy output as the primary item. The operator had to stand by, more or less idly, while the typing went on. And sometimes while the plane took off!

Under the Braniff operation a number of CRT's (cathode ray tubes) with 10-inch screens, and keyboards are handling the system.

Communication with the computer is simplified to the point where the request for information appears on the video screen for verification as the operator is entering it.

Once verified, the message is transmitted to the computer where the files are searched for the answer. The computer then sends its response back to the CRT terminal which displays the answer on the screen.

If hardcopy is desired, it can be printed out on a teleprinter. The whole transaction takes less than two seconds.

TELEPHONE SYSTEMS

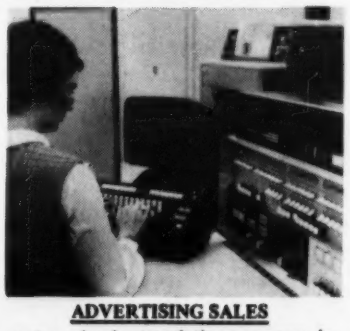
Another operation where people are kept waiting is when department stores are checking their credit status. The trade-off is between the amount of business lost through customers getting disgruntled as they wait for an OK, and the amount of merchandise lost to customers who are not paying up properly.

A large Los Angeles firm, Bullocks, recently went into the question, and has used display units as their answer. Speed in getting routine approval they find, is not too bad, but serious delays occur where non-routine points have to be referred to human credit-checkers. Here the faster, yet more thorough the check, the more satisfactory the results are. And here the store has installed cathode ray tube displays.

This may indicate that displays will oust hard-copy remotes. As yet the CRT is nowhere near replacing the teletype as the standard remote - and probably it will never come to that. The situation is analagous to that between the TV and the radio. There are now more radio sets in the USA than there ever were before - and yet people talk about TV so much that unless you watch industry statistics you can forget about radios. Displays are coming in. They do, like TV, have some attractions which the hard-copy remotes will never have. BUT they have to be selected carefully with the proper purpose in mind.

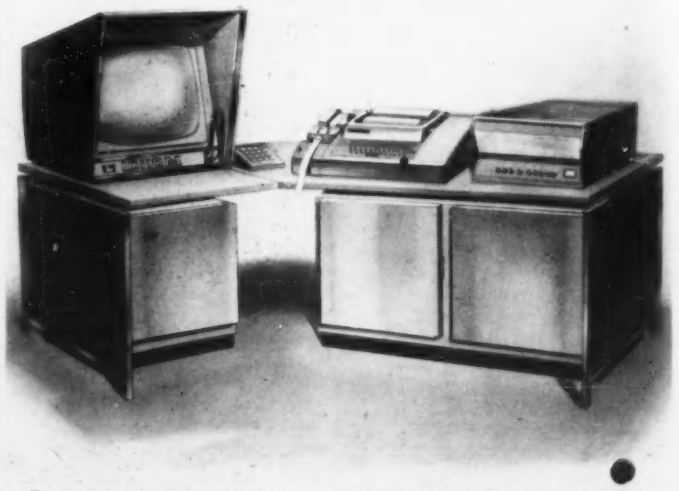
Keep them in mind. They are one of the cards in a systems analyst's hand.

Another way to obtain compatibility between the standard units being offered by the computer manufacturers and by the outside vendors is by actually placing a small computer system in the display itself - making it self-standing. This method has been followed by Information Displays Inc, of Mount Kisco, in their IDIIOM system (see picture). This firm has built and installed many systems with many computers - including IBM 360/65s. In the past they have obtained the necessary compatibility through altering the hardware - always an expensive operation. Now, they intend to use standardized hardware, and to insert a simple translation program in the system.



ADVERTISING SALES

The cost of this approach seems to be reasonable.



The IDIIOM display obtains compatability from software—see story.

Letters To The Editor

To the Editor:

I am being swamped with mail from people concerned with FORTRAN and its language functions. This is due to an article in your newspaper.

May I be quick to point out that the only concern of the SHARE BOS Project is the implementation of a higher level FORTRAN compiler by IBM.

The internal functions and language specifications are handled by the SHARE FORTRAN Project, the manager of which is:

Mrs. Lois Frampton
Yale Computer Center
60, Sachem Street,
New Haven, Connecticut.

You also have incorrectly printed my name as Robert instead of as below.

Ronald P. Duncan
Manager, SHARE BOS Project
Kennecott Copper Corporation
Salt Lake City, Utah. 84111.

Sorry about your name, Ron; but isn't it interesting to know that so many people ARE interested in BOS/DOS Fortrans? After all - the item primarily was about BOS and DOS, and only incidentally mentioned Fortran.

Hope you got some volunteers for the work your committee is doing - as a result of the deluge. Thanks for writing. Ed.

OUR COVER STORY

TRANSPORTABLE COMPUTER ROOMS

Our cover this week was taken from a Control Data brochure picked up at the Army Association meeting.

Control Data, the present contractor for the initial investigation phase of the Tactical Operating System for the Army was emphasizing its competence to handle the later phases during the show.

The company showed shelter-mounted tactical systems, such as the Control Data 1700 and 3300 systems, together with a complete range of peripherals, and communications devices. The recently improved electromagnetic radiation security needed for future tactical systems was also being brought to attendees attention.

The function of the transportable systems is simply to be mounted in specially constructed vans and shelters for land, airborne or shipborne operations. Then, as necessary, they are transported complete to any part of the battlefield and support sectors, ready to start immediate operation. Two and a half ton trucks or helicopters are used for the actual move.

Available peripherals include cathode-ray tube entry/display systems as well as the more convential keyboard devices.

Calendar

CONFERENCES, SYMPOSIA

Oct. 18, Wakefield, Mass. – The Federal Executive Board of Metropolitan Boston Second Annual ADP Symposium, "Improving Computer Utilization". Contact: Boston Federal Executive Board, Room 500-A, John Fitzgerald Kennedy Bldg., Boston, Mass. 02203.

Oct. 19-20, San Francisco – Association of Data Processing Service Organizations Management Conference. Contact: Jerome L. Dreyer, Automatic Data Processing, Inc., 1040 Highway 46, Clifton, N.J. 07013.

Oct. 26-27, Washington, D.C. – American Society for Cybernetics Symposium, "Purposive Systems – the Edge of Knowledge". Contact: Dr. Carl Hammer, Univac Division, Sperry Rand Corp., 2121 Wisconsin Ave., N.E., Washington, D.C. 20007.

Nov. 6-8, Urbana, Ill. – Computer Graphics Conference. Contact: Prof. C.W. Gear, Dept. of Comp. Sci., University of Illinois, Urbana, Ill. 61801.

Nov. 14-16, Anaheim, Calif. – Fall Joint Computer Conference. Convention Center. Contact: AFIPS, 345 E. 47th St., N.Y., N.Y. 10017.

USERS' MEETINGS

Oct. 16-19, Washington, D.C. – Automatic Information Display Equipment Users' Meeting. Statler Hilton.

Nov. 10-11, Anaheim, Calif. – Users' Meeting on Computers in the Laboratory. Jolly Roger Motor Inn. Sponsored by DECUS, Maynard, Mass. 01754.

SEMINARS, WORKSHOPS

Oct. 25-26, Washington, D.C. – Second International Computerized Type Setting Conference. Sheraton-Park Hotel and Motor Inn. Contact: Research and Engineering Council, 1411 K. St., N.W., Washington, D.C. 20005.

Nov. 2-4, New York City – Instructional meeting on "Effective Use of Simulation as a Management Tool." Contact: The American Management Association, AMA Bldg., 135 W. 50th St., N.Y., N.Y. 10020.

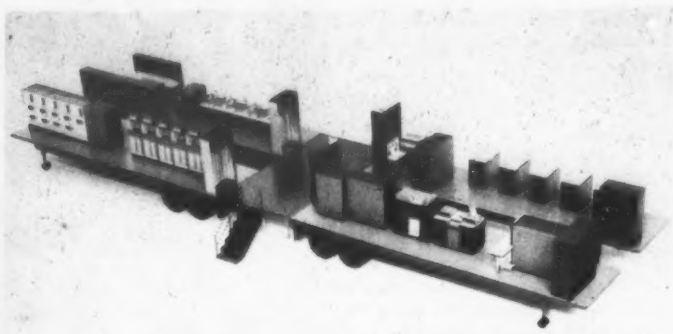
Nov. 15-17, Phoenix, Arizona – 15th Annual Electronics Seminar, "EDP – Potential for Management." Sponsored by American Gas Association – Edison Electric Institute Electronic Data Processing Committee. Hotel Westward Ho, Phoenix, Ariz.

SHOWS, EXPOSITIONS

Oct. 23-27, New York City – BEMA 9th Annual Business Equipment Exposition and Conference. Coliseum. Contact: Business Equipment Manufacturers Association, 235 E. 42nd St., N.Y., N.Y. 10017.

Army Association Talks Computers

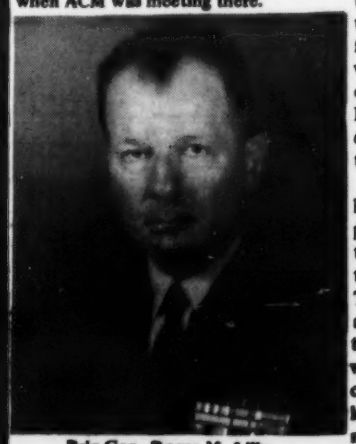
Dacor, which automatically corrects errors in digital communications, will be tested with the Army's field-mobile CS 3.



The Army's choice for initial contractor testing and evaluation of its Combat Service Support System (CS_3) shows how the necessary equipment can be held on four 35 ft. trailer vans. Models, clockwise from left, show installations for maintenance and support, data communications, the 360/40 central processor and mass storage units.

Computers In Viet-Nam

Washington last week was the host to a different view of computers than we normally see. As the Association of the United States Army met in its annual meeting the jargon words and initials underwent a change. No longer was TOS IBM's Tape Operating System, instead it was the Tactical Operations Systems. (The TOS contract was formerly awarded to the Control Data Corporation a year ago.) No longer was the 5500 one of Burrough's most successful operational computers – it too was now the name of a Control Data System. The verb "to task" was there but had somewhat changed grammatically from the multi-tasking systems of OS/360 to describing what happens when an agency has been "Tasked" with the responsibility for doing something! All-in-all, it was a very semantically different scene from that in the same hotel a couple of months ago when ACM was meeting there.



Brig.Gen. Roger M. Lilly

The keynote speech was given by Brigadier General Roger Lilly, USA, Commanding General of the Automatic Data Field Systems Command. And his interest was in automation on the battlefield. He pointed out that the potential for useful applications of automation in the field is enormous. To exploit the technology, the Army has a specific organization, and a specific concept and plans to develop and introduce automation within the field army. The major aim is to enjoy the benefits of maximum standardization through the systems approach to development.

There are presently three systems. First, the Tactical Operations System, or TOS, which supports the commander and his staff in the deployment of maneuver elements. Second, the Tactical Fire Direction System, "TACFIRE", which is addressed to the control of supporting artillery fires. Third, the Combat Service Support System, or "CS3" as it is called, which is dedicated to the logistic and administrative support of the army in the field.

So far as TACFIRE is concerned General Lilly seemed confident that everything was proceeding smoothly and that they were now on the threshold of entering engineering development. However, both CS3 and TOS are presently in an environment where concepts are being evaluated and requirements are being firmed up before proceeding further with the development and production systems. TOS is presently the least defined, according to the General.

After discussing these three ambitious systems in the Army's blueprint for the first half of the 1970's the General talked of a few individual automation projects for the Army in the field which are paying off today. The first was FADAC, the Field Artillery Digital Automatic Computer. Weighing about 225 pounds and normally carried in a personnel carrier, it accepts the request for artillery fire from any source, computes and displays accurate firing data to the weapons concerned. Although the artillery is the primary customer, FADAC has also been adopted for topographical survey computations, vehicle diagnostics, and a number of other uses. It started its use in Viet Nam in July. Reports on initial use in combat firing are highly favorable and the troops are said to be enthusiastic.

A separate and different application has been in inventory control and supply of spare parts. Based on a small National Cash Register, it was van mounted last year and deployed in Viet Nam. The system is the NCR 500 computer and with its peripherals is carried on two vans. The computer stays in one van and the second is used for stock control. The system is a punch card/ledger card system in fairly simple format. It uses a single ledger card to record, in readable text and on a mannetic strip, the stock control and other supply functional information that formerly required five separate records kept with inaccurate stubby pencils. It can handle a workload of up to 30,000 different inventory-line items of supply against which 20,000 separate requisitions are drawn monthly. Since the deployment of 20 of these systems in October 1966 in Viet Nam, the operations were so highly successful in improving the logistic's situation that additional sets were requested and approved. Presently they are being shipped in, with trained personnel packages, by air shipment, at the rate of one two-van system per week. Shortly, a total of 50 systems will be operational in Southeast Asia.

Another automated application in active use in Viet Nam since October 1966 is called the "TIIF" – Tactical Intermediary Interpretation Facility. This is used for intelligence units and then mounted equipment is normally located near the aviation unit which provides its raw input. Fifteen of these are operational in Viet Nam today, and the production output is rated outstanding.

2nd Generation Computers At AFLC

The Air Force Logistics Command this week told COMPUTERWORLD that the reason why they still had basically all 'second-generation' computer systems was that the so-called 'third generation' systems simply had not yet proved their superiority over the previous generation, so far as the AFLC was concerned. This surprising statement - which is against the trend of talk in the industry - came after the lack of third generation equipment had been revealed during the opening of a new, centralized system center last week

The problem presently facing the Air Force, as it prepared for a major step forward in logistics management, was the elimination of 'working against itself'. Too often it felt that one system when improved could wreck the operation of some other application. The aim was to eliminate at least 75% of this redundant effort by placing the 1,000 or more programmers and communication personnel presently working on computer and data systems under a single management.

The man selected to head the new center is Brig. General Frederick E. Morris, and his civilian counterpart is Stephen P. Moore.

The major initial task of the center will be to develop a completely new, world-wide logistics system to keep track of the status of about 80,000 items valued at approximately $5 billion. The third generation potential of mass access discs, etc., and real-time personnel were to be used in this.

Command Gets New Status

The Army has set up a new organization to take a hard look at the emerging systems. Headed by Lt. Col, H.A.MacIntire, the Institute of Systems is presently an embryo form (he DOES have a secretary!) but has a mission statement which is to supply the U S A Combat Development ("Think") Command with its own systems analysis capability, and to make scientific studies of the comparative effectiveness of proposals for improving the Army equipment, organization, and picture of the future.

A spokesman for the Command told COMPUTERWORLD that they did not expect to be very popular with equipment manufacturers - as they were not very concerned with the beauty or efficiency of the equipment per se - but simply with the fact as to whether or not it worked for the soldiers.

EDPeople

Statistical Tabulating also announces the appointment of **David K. Hamister** to the position of National Coordinator of Inventory and Production services.

Mr. Hamister brings to STC over 20 years of inventory and production experience.

Another promotion announced by STC is that of **Robert M. Burke** to Control Department Manager of Statistical's New York Data Processing and Computer Center.

EL PASO, Texas – Computing and Software, Inc. has named **Fred M. Thomas** as Director of Marketing of its newly formed Data Systems Division with headquarters in El Paso, Texas.

The Data Systems Division is primarily engaged in the supply of computer oriented services under contract nationally with outside organizations for data processing, data reduction, software services, computer programs, and computing equipment operation and maintenance.

Walter W. Slocum has resigned from the position of president of Weston Instruments, Inc. Having guided the activities of the Weston group for the last three years and generally achieving the overall objectives, Mr. Slocum now desires to devote more of his time to his varied personal interests.

Two Weston divisions have been established effective October 1, 1967:

*Weston Instruments Division which consists of the Newark, N.J.; Wichita, Kansas; Hatboro, Pa.; and Lexington, Mass., operations. **Charles M. Kirkland** has been appointed president of this division with headquarters at the Newark plant.

Howard J. Warnken has been appointed president of the Components Division with headquarters at the Archbald, Pa., plant.

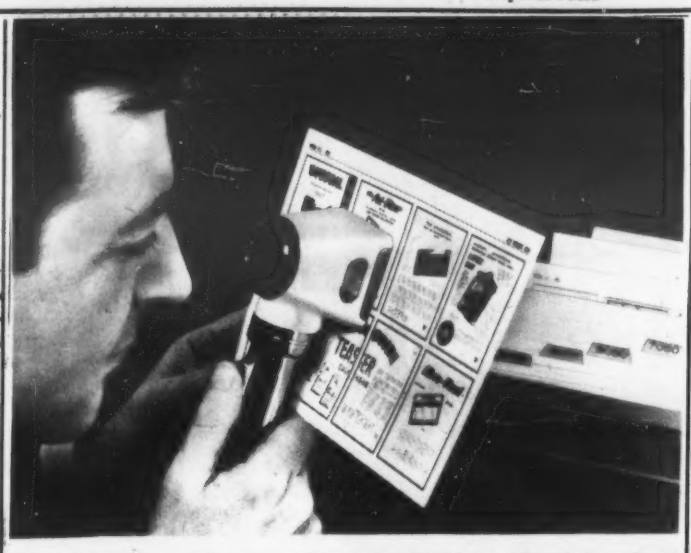
Mr. Michael R. Noraro, President and Chairman of the Board of Statistical Tabulating Corporation, announces the promotion of **Mr. John A. Manginelli** to Production Manager of Statistical's New York Data Processing and Computing Center.

SAUGERTIES, N. Y. – Robert Klonfas, Director of Marketing, Ferroxcube Corp., announced that **James T. Turner** had been appointed District Sales Manager for Arizona.

Ferroxcube Corporation manufactures memory components and systems, and ferrite cores and devices. They have facilities in Saugerties, N.Y. and Englewood, Colorado.

Americo L. Cunha, formerly Superintendent, Oakland Plant for The Standard Register Company, has been promoted to Manager, Pacific Division. Announcement of the appointment was made by D. F. Whitehead, Vice President - Operations, for the national business forms company based in Dayton, Ohio.

At the same time, it was announced that Barrett B. Klopfer, Vice President - Pacific Division, has been appointed to the staff of K. P. Morse, President, to work on special assignments. He will maintain his headquarters in Oakland.



The advertising people seem to have something here. The picture shows a simple reader, used to magnify images five times – and so to bring a type of semi-microfilm capability into easier use than with the standard desk-top readers.

May have some application in your area -- It's certainly simple enough.

$3,000 PRICE TAG ON 'LOWEST-COST' TERMINAL

Terminal Doubles As Typewriter

A new company, DATEL Corporation, Palo Alto, Calif., has entered the growing terminal market with a 40,000 square foot plant being built in Wyoming – and an order for 120 terminals from a one-year old firm in the San Francisco Bay area. They also entered the market with some claims about their product which make interesting reading – such as:

*FASTEST ON THE MARKET
*LOWEST COST
*LIGHTEST
*SIMPLEST TO USE

THE EQUIPMENT

The equipment is like a normal typewriter, with four additional keys. The only difference to a typist from a standard, 15-inch, electric typewriter are the four additional keys added for specialized computer command functions. It has the same height as a standard keyboard and unlike most data terminal models, Datel's model requires no special well desk or console mounting. The equipment is considered the smallest on the market and may be carried in a suitcase.

Weighing approximately 50 pounds, a record for lightweight terminals, the solid-state units are designed with circuit chips – the first to use them – and the entire integrated circuitry is contained in one package. In addition, Datel is the only manufacturer of a portable terminal to use the SELECTRIC-type sphere – upper or lower case type, tabbing, ribbon shift and standard features.

A big feature is the dust-resistant qualities engineered into their terminal instruments. Hermetically-sealed reed relay switches actuated by miniature magnets provide maximum dust and other foreign matter protection. It is expected that no downtime will be required for cleaning, in spite of erasure matter that falls on the keyboard.

The units can "talk" to a computer regardless of make or size, at a rate of 15 characters per second. No special equipment or detailed instruction is required to use the highly sophisticated terminals.

Transmission and reception signals for the basic terminal are coded in a six-bit binary code with one start bit, one check bit, and one stop bit. Seven bit codes, including ASCII are available in other models in the company's Series 30. A special feature provides parity checks to confirm the accuracy of all data transmitted and received.

DELIVERY, PRICES

Deliveries are expected to start in January, 1968 when the Riverton Plant is completed. Prices are expected to be between $2,800 and $3,800 per terminal depending upon the features involved.

The new DATEL terminal works as an office typewriter until it is needed as a conversational terminal. Then the operator simply dials a distant computer. She uses the office telephone, putting it on an acoustic coupler when the connection is made.

Sun Oil Story (From Page 1)

SCERT To Check Programming

Continued from Page 1

selection of the system was not handled by the SCERT evaluation technique which Sun Oil has recently leased from Comress in Washington (See COMPUTERWORLD, Oct. 11).

RAPID DELIVERY

Scheduled for delivery later this month and in operational use by November, the computer will be installed in the Computation Center at Sun Oil's headquarters building in downtown Philadelphia (1608 Walnut Street).

The Univac 1108 will be used for processing a wide variety of Sun Oil's business operations and scientific problems. Among the business applications will be the updating of more than 200,000 daily transactions among the 2,000,000 Sunchex credit cards in use by the public, as well as for payroll preparation and general accounting procedures.

Eventually, it is planned to connect the computer to Univac 1004 Card Processing machines serving as remote terminals for receiving and transmitting data in the offices of Sun Oil subsidiary companies and outside customers.

The Univac 1108 System to be supplied to Sun Oil will be equipped with a 65,000 word core memory. Peripheral equipment will include two Univac 1004 Card Processors, eight magnetic tape units, one Fastrand mass memory storage system, six FH 432 memory drums and eight Uniservo 8C magnetic tape units.

While SCERT was not used to help select the Univac system, it has been used in a rather interesting way in the operation. What has been designed is to take a set of about 150 programs as their specifications are being developed and to create new SCERT timings from time to time. Sun Oil hopes, in this manner, to establish just what sort of expansion factor should be applied to preliminary timing estimates to allow for systems changes.

(The problem of systems alterations has always been a thorn in the side of people trying to estimate how much of a computer-potential is needed to carry out a particular job – and even more to users trying to evaluate computer proposals with timing charts included. While these look very pretty – and often are the only things which a user has to work on – the information in them is rarely expected to be usable by the time the system comes into operation. The reason for the change cannot normally be traced – and the user feels that he cannot really tell whether the proposal timings were achievable with the hardware and software supplied.)

They have already run SCERT timings on the jobs concerned, and intend to do so a number of times in the next few months. Then the series of times will be checked against both computer runs, and against SCERT simulations of the final, approved system.

'Satellite-Style' Reporting Terminal

A new, 'only on special order' terminal records retail information (sales, credits, deliveries etc.) during the day and then, when everything is quiet during the night, automatically reports them when its central computer rings it up. The terminal is an IBM 1907 Batch Recording System, and the storage is on a 1,000 foot reel of magnetic tape. The tape is re-usable, and held in a cartridge. It holds 7,500 characters of information, which is entered through keyboard or reader.

The terminal was designed for use in distribution agencies, and is available only on special order.

The overall process is very similar to that used when communicating from a satellite to its ground station. Here the information is again held on magnetic tape as the satellite goes around the world, and waits until it receives a command from its home station before outputting the data collected during its transits.

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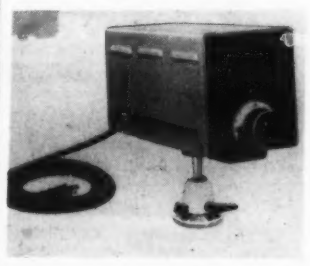

HIGH RESOLUTION TV CAMERA

A new high resolution television camera with important applications in the transmission of both microfilm and original documents has been developed by Raytheon.

Priced at $2,460, the new XRS-11 camera has a resolution exceeding 800 lines at the picture center with a 4 x 3 aspect ratio or 1000 lines with a 1 x 1 aspect ratio. It is appropriate for standard 8½ x 11-inch documents and A and B size drawings.

Typing, pencil notations, or drawings are portrayed clearly through the camera's adjustable 12 db delay line aperture correction. The single case camera depicts 10 shades of gray.

TWO NEW PLOTTERS FROM SDS

LOS ANGELES, CALIF., Oct. 16, 1967 – Two new graph plotters have been designed to provide pictorial hard-copy output for SDS Sigma computers.

The SDS graph plotters operate on the digital incremental principle and are drift-free. Two models offer a choice of drum widths: Model 7530 with 12-inch-wide drum, plot size of 11 inches by 120 feet, and incremental speed of 300 steps per second; and Model 7531 with 30-inch-wide drum, plot size of 29.5 inches by 120 feet, and incremental speed of 200 to 300 steps per second.

HIGH-SPEED CARD READER

LOS ANGELES, CALIF., Oct. 9, 1967 – The SDS Model 7140 Card Reader is a high-speed peripheral device that reads punched cards at a rate of 1500 cards per minute.

Designed for use with SDS Sigma computers, the new card reader reads standard 80-column punched cards in either Extended Binary-Coded Decimal Interchange Code (EBCDIC) or binary code. Cards are read serially by columns.

New H-1250 Keeps 1400 Style Up-To-Date

The new Honeywell 1250 systems may not be very interesting technically. To a user, however, it demonstrates that the IBM decision to kill the 1400 series three and a half years ago was murder most foul - for those systems had a great deal of life in them. That life can be evidenced by the creation of a real-time system (such as the 1250) without losing the data compatibility which Honeywell users have prized.

The 1250 system is basically the standard Honeywell offering for the medium-level multi-programming market. It differs from the H-1200s presently in operation in that it has as standard features the multi-programming barricades, the double input-output sectors etc. which the software package needs. In fact, it can best be thought of as a system which fits its software package - and fits multi-programming.

The multi-programming technique used is somewhat different from the standard type. As with most manufacturers, the full freedom of being able to pile any group of programs into the hopper, or down a data-phone just whenever they appear has not been found practical. Some compromise has to be found before the overhead is reduced to economic levels, either by limiting the type of jobs, or the amount of core they use, or something else.

Honeywell has chosen to adopt a double job stream to handle this. Using this they can provide for two quite independent programs, each with its own input and output units, operating at the same time. The advantage is as standard multi-programming - that it saves time by overlapping input-output and processing. Presently few figures as to its efficiency are available, but the one major one the company talks about is where two sorts were run together ... with only a 15% degradation. (That means that effectively productivity went up some 42%!)

Communications, and other high priority programs which have to have operating precedence, can be handled by the Message Mode Communications Supervisor which handles blocks of characters (rather than single characters) for data collection systems, information retrieval, billing and inventory etc.

The advantage of using character-blocks is felt both in the higher operational speeds the communications networks can handle and also in the reduced overhead in the operating system. The package can interface with Honeywell and IBM terminal devices, including the Honeywell data-stations, AT & Ts DATASPEED Type 2, Teletypes, IBM 1050s, Honeywell's VIP displays as well as other Series 200 computers.

The software for the new Honeywell Computer is called the Extended Mod 2 Operating System, and requires only 81K core as a minimum. The tape drives used (at least 3) should be equipped with the IBM Code Compatibility feature. Disk Pack Drives are necessary as well as tape units as the systems use a mixed disk-tape operational philosophy. The tapes are used primarily for work storage and sorting. The cost for a H-1250 processor will vary between $150,000 and $425,000, with leases dependent on the time-span contracted for, being somewhere in the $3,545 to $9,725 · month. The company estimates that typically the system (including tapes, disk drives etc.) will lease for some $10,000 a month.

Deliveries start next July, and a number of orders have already been taken.

New Honeywell 1250, announced earlier this month for delivery next year.

Modified Terms In C-E-I-R, CDC Merger

The holders of C-E-I-R stock will get a reduced holding in CDC as a result of the agreement to change the merger terms from one CDC share per 6.0 C-E-I-R shares to one for 6.35. However, this has allowed the elimination from the agreement of a clause stipulation that 10% of the proceeds were to be placed into escrow pending finalization and settlement of some of C-E-I-R's potential liabilities. Both boards of directors felt that the elimination of this complication was an advantage, and so they were able to agree to the new modification of the agreement.

The two firms have executed the modified agreement, and now the matter comes up before the C-E-I-R stockholders next month for their approval.

OPTIMA Program On 6000's

Continued from Page 1

With OPTIMA's composition and formulation features, matrix sizes are limited only by the ability to index 250,000 unique variables.

Quick and reliable solutions to central optimization problems are a vital part of OPTIMA. All algorithms are designed to push through to a solution, regardless of degeneracy or other difficulty. Each algorithm has a large number of fall back procedures built in, which are automatically activated whenever trouble occurs.

OPTIMA contains a Matrix Generator Language which facilitates the manual collection and keypunching of matrix numbers. The programmer writes a problem-oriented description; the computer performs all of the clerical tasks – collecting, formatting and generating matrix entries. Matrix Generator Language is a high-level, process-oriented, computer language which allows the user to create his own matrix generator programs.

Another OPTIMA feature, Report Generator Language is designed to specify the collection and formatting of meaningful reports. Unwanted information can be eliminated or relegated to a minor position in the output listing. Solutions of a number of problems can be compared, and manager-oriented reports can be automatically produced.

Now being developed by Orchard-Hays and Company, OPTIMA will be completed in three versions. The basic OPTIMA 1.0 will be made available during the last quarter of 1967. OPTIMA 2.0, a complete and comprehensive system, will be ready during the first quarter of 1968. An advanced system, OPTIMA 3.0 will be delivered during the second quarter of 1968.

OPTIMA is a proprietary program and not in the public domain.

Future Fortran For OS/360 Users

Version 2 of Operating System/360 FORTRAN H is scheduled for release by IBM in April, 1968. Improvements over the available FORTRAN H and additional functions include:

Reduced Compile Time: Based on a test of a group of 15 programs which have been run against the released FORTRAN H and Version II, compile time reductions average more than 30 percent and range as high as 47 percent. These compile percentages are based upon compile step time less scheduler time. The figures were obtained from runs on a System/360 Model 65 under the OS/360 Releases 11 and 12 PCP (Primary Control Program) using an IBM 2301 from storage as the system residence.

Support of Direct Access Statements: The Version II user can read and write fixed length records randomly from or to direct access devices.

Increase Capacity: With improved format and handling of internal tables, Version II requires 18K bytes of internal table space for every 100 source cards instead of 35K bytes. A source program of about 600 statements (cards) can be compiled on 200K bytes of main storage.

Additional Debugging Facility, XREF: This user-controlled option aids debugging by furnishing a listing of each source symbol and the internal sequence numbers of the source statements where the symbol is referenced; and a listing of each source label, its associated internal sequence number, and the internal sequence numbers of all the source statements that reference the label. With this new facility, the user can easily correct or modify his FORTRAN program using the cross-reference listing of the symbols and labels.

Improved Storage Map: This storage map is produced to give additional information about each symbol appearing in the source program. It includes information as to whether a symbol appeared on the left or right of an equal sign or both, as well as information as to whether the symbol was used as an argument.

Restrictions Eliminated: The restriction of 25 call-by-name arguments has been removed. The maximum number of call-by-name arguments is variable and governed by the total number of all arguments contained in the program.

The restrictions requiring dimension information to occur before certain uses of EQUIVALENCE statements have been removed. Version II fully complies with USA FORTRAN.

Jargon Is Not Dead- It's Not Even Hiding!

AUTHORITY

The Federal Automatic Data Processing (ADP) Council is established pursuant to the general authority of the Federal Executive Board. Its establishment is in accord with the desires of the President of the United States as expressed in a White House Memorandum for Heads of Departments and Agencies, dated June 28, 1966, and the instructions of the 89th Congress as expressed in the Summary to H.R. 4845.

Federal ADP Council is to improve the management and use of the Federal Government's automatic data processing resources with a view toward optimizing the effectiveness of government operations. This objective shall be accomplished by:

a. Promoting the exchange of ideas, techniques, applications, programs and routines among automatic data processing equipment users.

b. Promoting the professional development of personnel and the advancement of automatic data processing by conducting [illegible]ars, providing for equipment demo[illegible]trations, and arranging other activities that may improve the management of automa data processing in the Federal Government.

c. Developing a closer relationship and a better communication between the ADP organization and the ADP user.

d. Promoting and exchanging cost reduction ideas and techniques.

e. Publicizing the activities of Federal establishments in the field of data processing on an interagency basis as well as for the information of the general public.

Membership

Membership is offered to any Federal Government activity located within the area described above that meets one or more of the following qualifications.

a. Operates automatic data processing equipment as defined in the Bureau of the Budget Automatic Data Processing Glossary.

b. Operates punched card accounting machines.

c. Has an ADP application performed for them by another Federal Government activity, commercial organization, service bureau, etc.

d. Plans to develop an ADP application.

e. Is involved in some part of an ADP operation.

f. Has operations that are suitable for conversion to ADP.

FINANCIAL MATTERS

NEW YORK – Earnings of International Business Machines Corp. in the third quarter jumped 29% on a gain in gross revenue of 27% from the year-earlier period.

Both earnings and revenue in the third quarter were the highest for any three-month period.

IBM said third quarter profit increased to $169,388,875, or $3.02 a share, from $130,906,817, or $2.34 a share, a year earlier. Gross revenue went up to $1,362,500,574 from $1,069,917,791.

Previous quarterly highs were set in the second quarter this year, with profit of $145,971,346 and revenue of $1,236,482,173.

Results for the first nine months this year also set highs. Earnings climbed to $452,500,171, or $8.08 a share, from $384,533,362, or $6.90 a share, in the 1966 period. Revenue increased to $3,749,586,323 from $3,062,898,566.

Thomas J. Watson Jr., chairman, said the results reflect the continued high level of business volume in IBM's System 360 computer line and an increased level of outright sales of the equipment. He warned that stockholders should recognize that outright sales have the effect of realizing income currently which, on a rental basis, would be realized in future periods.

ANAHEIM, Calif. – California Computer Products, Inc., the plotter maker, reported net earnings of $220,217 on sales of $3,044,843 for the first quarter of fiscal 1968, ended October 1, 1967. This compares with net earnings of $217,652 on sales of $2,086,487 for the like period a year ago. On a share basis, earnings amounted to 20.1 cents per share on 1,096,815 average shares outstanding, compared with 25.9 cents per share on 838,851 average shares outstanding last year.

Lester L. Kilpatrick, president, attributed the differences in performance primarily to increased marketing effort. "During the past year CalComp has increased company sales offices form 4 to 24 and marketing personnel from 33 to 133," he said.

BINGHAMTON, N.Y. – The Advanced Products Division of Link Group, General Precision Systems, Inc., has received two contracts totaling more than $700,000 to develop a Radar Image Mapper and other equipment. The systems will be developed for the U.S. Army Engineer Topographic Laboratories, Fort Belvoir, Va.

The Radar Image Mapper will remove sweep and squint distortion from side looking radar images on film. Radar images will be scanned one line at a time. The distortion will be corrected by a computer and a new film will be produced. The entire system will be installed in a van and used in the field.

ANAHEIM, Calif. – California Computer Products, Inc., has received a sub-contract to provide the "militarized" digital plotter for use in Tactical Information Processing & Interpretation Systems being built by Texas Instruments Incorporated of Dallas, Texas, for the Aeronautical Systems Division, Wright-Patterson Air Force Base, Ohio.

A digital plotter automatically reduces computer data to graph, map or chart form. The "militarized version", according to CalComp president Lester L. Kilpatrick, "will be built to operate in rugged military environments."

How They Moved Last Week

Week Ended October 13, 1967

	1967 High	1967 Low	Week High	Week Low	Last	Week Net Change	Week %Change
NEW YORK STOCK EXCHANGE							
Addressograph-Multigraph	73 -	46 7/8	72 7/8	67 5/8	69 1/2	- 2 3/8	- 3.30
American R&D	152 1/2	37 3/4	148 -	128 1/4	136 -	-13 3/4	- 9.18
Ampex Corp.	40 3/4	22 3/4	36 7/8	33 -	33 3/8	- 2 1/4	- 6.34
Burroughs	174 1/8	80 7/8	174 1/8	161 3/4	163 1/4	- 8 1/2	- 4.95
Collins Radio	114 7/8	53 -	98 -	91 1/8	91 1/2	- 5 3/8	- 5.55
Control Data	142 7/8	33 1/2	142 -	132 -	138 3/8	- 3 5/8	- 2.55
Electronic Associates	30 1/4	16 3/4	30 1/4	27 1/2	28 7/8	+ 2 -	+ 7.44
General Electric	115 7/8	82 1/2	112 3/4	105 1/2	108 5/8	- 4 1/8	- 3.66
Honeywell	92 3/4	63 1/2	92 3/4	87 -	87 -	- 4 -	- 4.40
IBM	586 -	362 1/2	586 -	565 -	586 -	+18 -	+ 3.17
Litton	110 3/4	79 1/2	107 1/4	102 3/4	103 3/8	- 3 1/2	- 3.28
Nat Cash Register	119 1/2	67 1/8	119 1/2	110 -	112 -	-	-
RCA	62 3/4	42 5/8	62 -	58 -	58 1/2	- 3 -	- 4.88
Raytheon	101 1/2	49 -	101 1/2	94 1/2	98 -	+ 2 -	+ 2.08
Sanders	58 3/8	37 5/8	58 3/8	52 -	55 1/4	- 1 5/8	- 2.85
Scientific Data	124 7/8	70 3/8	124 3/4	108 1/2	113 5/8	-10 3/4	- 8.64
SCM	82 1/4	52 1/4	56 -	52 1/4	53 1/8	- 2 3/8	- 4.28
Sperry Rand	50 1/8	28 1/8	49 7/8	45 1/2	47 1/8	- 2 7/8	- 5.75
NYSE COMPUTER STOCK AVERAGE						- 2.62	- 2.05
AMERICAN STOCK EXCHANGE							
ANelex	51 5/8	11 1/2	51 5/8	44 1/8	46 -	- 3 7/8	- 7.77
Audio Devices, Inc.	30 3/8	21 5/8	26 5/8	25 -	25 1/8	- 1 1/8	- 4.30
Automatic Data Processing	50 3/4	41 1/2	46 1/2	43 3/8	43 3/8	- 1 1/8	- 2.53
CalComp	99 1/8	60 1/4	90 3/8	80 1/8	81 3/4	- 8 1/4	- 9.17
Computer Applications	31 1/2	14 -	31 1/2	28 1/4	30 3/8	- 1/2	- 1.62
Computer Sciences	33 1/4	18 -	33 1/4	30 1/8	32 3/4	+ 2 3/4	+ 9.17
Digital Equip. Corp.	120 -	29 3/8	118 -	105 -	110 1/2	- 7 5/8	- 6.45
GC Computer Corp.	41 -	23 1/4	26 5/8	23 7/8	24 -	- 2 1/8	- 8.13
Leasco	93 1/2	33 5/8	93 1/2	79 -	80 7/8	-11 1/8	-12.09
Levin-Townsend Computer Corp.	57 -	10 7/8	46 7/8	43 7/8	46 3/8	+ 3/4	+ 1.64
Milgo Electronics	15 5/8	5 1/8	12 3/8	11 1/2	11 1/2	- 1 -	- 8.00
Planning Research	54 -	19 5/8	54 -	50 3/4	53 1/4	+ 3 -	+ 5.97
Potter Instrument	37 3/8	12 3/8	36 7/8	29 5/8	29 7/8	- 5 3/4	-16.25
AMEX COMPUTER STOCK AVERAGE						- 2.92	- 4.57

	1967 High Bid	1967 Low Bid	Sept. 29 Bid	Sept. 29 Asked	Last Week Bid	Week Net Change Bid	Week % Change Bid
OVER-THE-COUNTER							
Bolt, Beranek & Newman, Inc.	30 -	8 1/4	25 -	25 3/4	25 1/2	- 1/2	- 1.96
C-E-I-R	20 1/8	6 5/8	18 7/8	19 1/4	19 1/8	- 1/4	- 1.31
Computer Usage	56 -	20 1/4	56 -	58 -	50 -	+ 6 -	+12.00
Cyber-Tronics	17 1/2	4 3/4	11 3/4	12 1/2	12 1/4	- 1/2	- 4.08
Data Products	17 7/8	2 1/2	13 1/4	13 5/8	12 3/4	+ 1/2	+ 3.92
Digitronics	18 1/4	6 -	16 1/4	16 3/4	17 1/8	- 7/8	- 5.11
DPA, Inc.	16 1/4	4 1/4	9 5/8	10 1/8	9 7/8	- 1/4	- 2.53
Electronic Memories	54 1/2	12 3/4	49 1/4	58 1/4	52 1/4	- 3 -	- 5.74
Fabri-Tek	15 3/4	6 -	10 3/4	11 1/4	10 7/8	- 1/8	- 1.15
LMC Data, Inc.	13 5/8	7 3/8	13 -	13 1/2	12 1/2	+ 1/2	+ 4.00
Management Assistance	24 3/8	12 1/2	12 5/8	12 7/8	14 1/8	- 1 1/2	-10.62
Memorex	226 -	63 -	192 -	195 -	200 -	- 8 -	- 4.00
Mohawk Data Sciences	153 -	32 -	141 1/2	143 1/2	148 -	- 6 1/2	- 4.39
Optical Scanning Corp.	92 1/2	25 3/4	60 -	61 1/2	65 -	- 5 -	- 7.69
Recognition Equipment Inc.	131 -	48 1/2	98 -	102 -	103 -	- 5 -	- 4.85
Systems Engineering Labs	45 1/2	8 7/8	45 1/2	46 1/4	44 -	+ 1 1/2	+ 3.41
University Computing Co.	127 -	65 -	115 -	118 -	126 -	+11 -	+ 8.73

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Chicago, Ill. 60656
Area code (321) 992-0760

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DATA PROCESSING TRAINEES AND THE DRAFT

Personal Page

By Everett D. Parker
Personal Page Editor

The employee turnover rate is high in data processing. Higher pay, better working conditions, substantial promotion – these are only several reasons why people move so often and so eagerly. A man with six-months experience or more is a valuable "commodity" in a market where the *buyer must pay a high price for a questionable product.*

As a result of the excessive demands of this industry, many employers and managers will hire intelligent young men and women to learn and perform as programmers. At this level another employment "threat" is common – the draft. During the current fiscal year – July through June – the intent of the Armed Forces is to increase its numbers by approximately one million. Of this total number close to 350,000 men will be inducted into the services. The size of our Armed Forces will grow, not lessen. Such demands are considerable for the young men of today and, in addition, create problems for employers.

The loss of young men from training programs is a serious one. The exodus of qualified young people creates a burdensome responsibility on the DP Manager. Whom should he hire as a programmer trainee? How, if possible, can he retain a bright – but draft eligible – learner? This question is not a rhetorical one – it is very real. The answer provided is cloudy at best, but not altogether unhelpful.

THE PROBLEM

What is the problem we are looking at? Can a data processing or programmer trainee be deferred from the draft? If so, can he be deferred for an indefinite period of time until he is a professional? And once he is established in the field, is he too valuable and too difficult to replace? When we look at each of the above questions, we can easily see how difficult it is to solve deferments on an individual basis. But the Selective Service System is set up to do just that.

One company submitted four deferment requests to four different local draft boards. All the letters were similar in content because the trainees were in similar circumstances. Two trainees received deferments; two did not. This kind of confusion has existed and has disturbed both industry and government. Because of its alarm the U.S. Congress enacted legislation which has helped clarify some of the things which make one eligible for deferment. The Military Selective Service Act of 1967 is the title of the current law which gives some assistance. Since a man's eligibility for the draft is a legitimate question, it is wise to know the draft classification procedures and be aware of contact points which may give assistance to a hiring manager.

DEFERMENT

The President of the United States is the one who authorizes draft deferments. His power, given to him by Congress, insures deferment for a person in any category of industry, agriculture, science or academics which may be found "necessary to the maintenance of the material health, safety, or interest". An important comment is that *deferments are always based on the individual's status.* There is no such thing as a general or blanket deferment for groups of people. Each deferment is an individual occurance derived from the deliberation and judgment of a local draft board.

The procedures an employer must follow are simple.

Step 1
A. Employer writes to Local Board.
B. Employee writes to Local Board at the same time as his employer.

Step 2
If request for deferment is denied, the employer may send request for reconsideration to Local Board to the Appeal Board.

Step 3
If the Appeal Board turns down the request, the employer can request of the Appeal Board that the appeal be transferred to the Appeal Board which has jurisdiction over the principal place of the employee's employment. (This applies in those cases in which the employee has moved out of the area where he originally registered. For instance, a man may register in Norfolk, Va. at age eighteen and find himself working in Chicago three years later.)

Step 4
On special occasions, if one member of the Appeals Board dissents, an employer can appeal its decision to the President. This is very rare and there *is no appeal from the President's decision.*

HELP WANTED

There is an inordinate complexity to the draft system. But if an employer feels he has grounds for requesting a deferment, the Selective Service System encourages him to write on the employee's behalf. Provided that the three qualifications apply (see insert), an employer should feel that a draft deferment is reasonable and, in fact, an obligation on his part. If any questions arise concerning draft problems, the employer is free to call the Local Draft Board or the State Director of the Selective Service System.

Occupational Deferment Requires:
1. **Possession of a critical skill.**
2. **Employment in an essential activity.**
3. **Loss of the employee will seriously affect carrying out the mission of the company.**

If an employer has questions concerning a draft deferment request, he should talk it over with someone knowledgeable about selective service procedures.

Please note the bibliography which includes some simple but helpful reference pamphlets.

Send your comments to the following address:

Everett D. Parker
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BIBLIOGRAPHY

A very helpful brochure, "Information for Employers," is available from the Government Printing Office, Washington, D.C. You can also request this document from the State Director, Selective Service System in your State (Brochure number: 1967 -0-261-054.) Another government document which will help isolate skills and activities, is the "U.S. Dept. of Commerce List of Currently Essential Activities and U.S. Dept. of Labor List of Currently Critical Occupations." Request this folder from the Executive Secretary, Interagency Advisory Committee on Essential Activities and Critical Occupations, Bureau of Employment Security, U.S. Department of Labor, Washington 25, D. C.

An excellent and comprehensive handbook, published expressly to assist employers in this difficult area is "Selective Service and Military Policies on Classification, Deferments, and Delay." The handbook costs several dollars but is worth it. Send to: Engineering Manpower Commission of Engineers Joint Council, 345 East 47th St., New York, N.Y. 10017.

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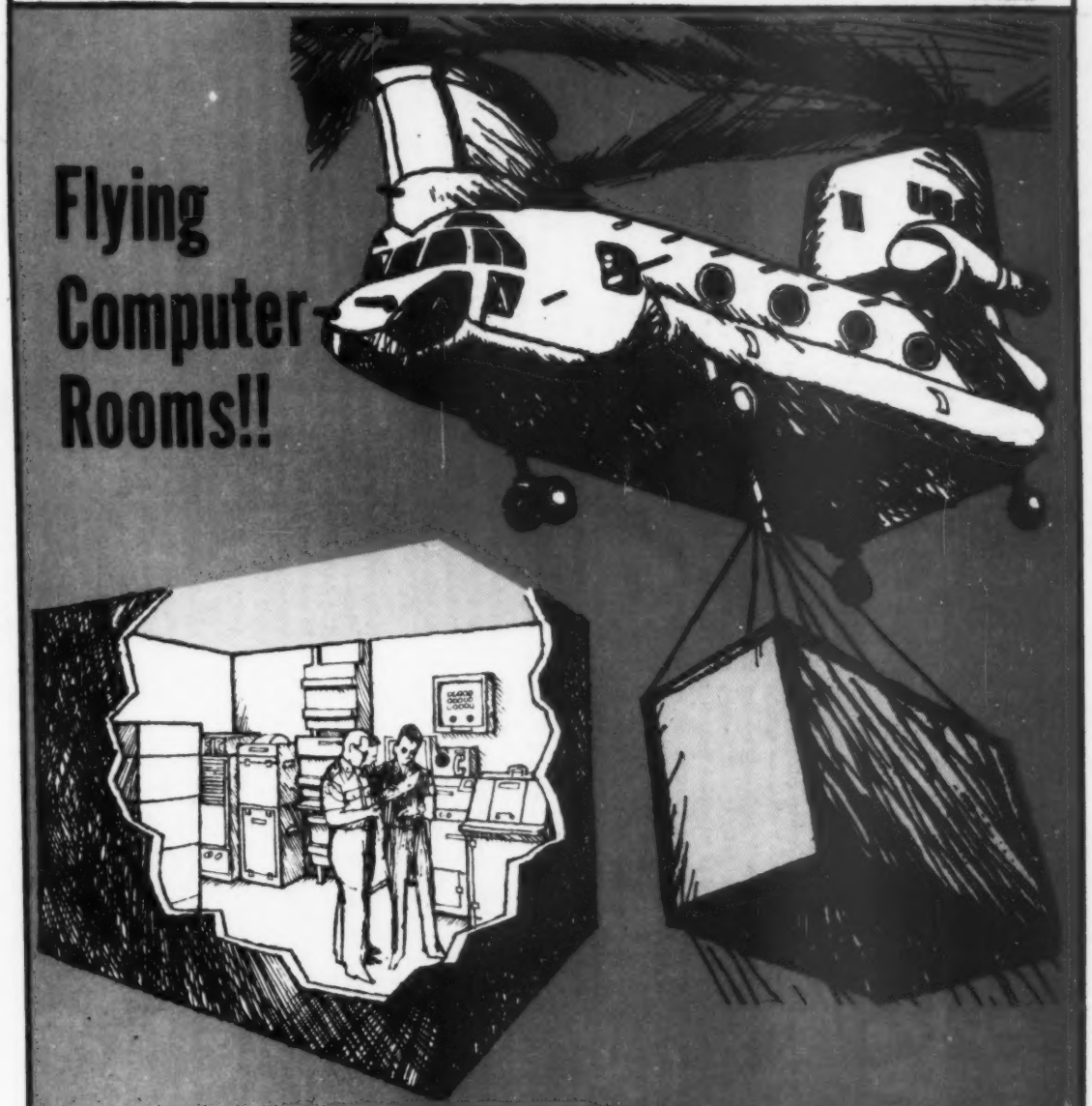

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